PURPOSE STATEMENT:
A new development in seismology over the past few years, Distributed Acoustic Sensing (DAS), transforms telecommunication fibre-optic cables into linear arrays of (large-N) ground motion sensors. The combination of new technology and cutting-edge methodologies is transforming how seismologists acquire data, providing much higher resolution and a broad range of applications. These types of passive source experiments will begin to bridge the existing gap between more traditional passive seismic images of the Earth with the geological and geochemical samples of the Earth’s materials.

The Postdoctoral Fellow will be responsible for the deployment, acquisition, analysis and interpretation of large DAS datasets and for integration of these into existing and concurrent broadband seismic deployments. The goal is to expand the capability of our strong field-based seismic imaging research utilising DAS in order to improve resolution, and therefore understanding of the Earth’s structure and evolution.

The Postdoctoral Fellow is expected to undertake work in all three areas of academic activity – research, education and service (including outreach). The allocation of time to each area will be discussed with the position supervisor annually and be reflective of the external funding conditions that support the appointment, the appointees research agenda, school and interdisciplinary teaching requirements and leadership opportunities within the School environment.

KEY ACCOUNTABILITY AREAS:
Position Dimension & Relationships:
The Postdoctoral Fellow will be based at the Research School of Earth Sciences (RSES), and will work under the supervision of Prof Meghan Miller. The successful candidate will also work closely and collaborate with other members of the Geophysics area. The Postdoctoral Fellow will be accountable to the Director of the School. The Postdoctoral Fellow will be expected to work collegially, leading by example to develop and maintain effective, productive and beneficial workplace relationships within all academic and professional School and College staff, students and honorary appointees, as well as with industry stakeholders. This position will also have a mentoring role for students and will engage in collegial and productive collaborations with local, national and where possible, international colleagues.

Role Statement:
In their role as an Academic Level A the Postdoctoral Fellow is expected to:
- Undertake independent research in the area of DAS seismology, with a view to publishing original and innovative results in refereed journals, present research at academic seminars and at national and international conferences and collaborate with other researchers at a national and international level. This includes working as part of a team on an externally funded project subject to deadlines.
- Collaborate with senior staff to actively seek and secure external funding, assist to prepare and submit research proposals to external funding bodies as appropriate.
Subject to the requirements of the funding source and where an opportunity exists, the successful applicant may be asked to contribute to the teaching activities of the School at the undergraduate and graduate levels. This includes, but is not limited to, the preparation and delivery of lectures and tutorials, the preparation of online material, marking and assessment, consultations, and with students or acting as subject coordinators.

Supervise students working on individual or group projects at undergraduate, honours, graduate-coursework levels. Assist with supervision of research students.

Contribute to the broader academic activities of the school as opportunity arises.

Assist in outreach activities including to prospective students, research institutes, industry, government, the media and the general public.

Maintain high academic standards in all education, research and administration endeavours.

Take responsibility for their own workplace health and safety and not wilfully place at risk the health and safety of another person in the workplace.

A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.

Other duties as required that are consistent with the classification of the position.

Comply with all ANU policies and procedures, and in particular those relating to work health and safety and equal opportunity

**Skill Base:**
A Level A academic will work with the support and guidance from more senior academic staff and is expected to develop their expertise in teaching and research with an increasing degree of autonomy.

A Level A academic will normally contribute to teaching at the institution, at a level appropriate to the skills and experience of the staff member, engage in scholarly, research and/or professional activities appropriate to their profession or discipline, and undertake administration primarily relating to their activities at the institution. The contribution to teaching of Level A academics will be primarily at undergraduate and graduate diploma level.

**SELECTION CRITERIA:**
- A PhD (or awarding of a PhD within six months of appointment) in Earth sciences, seismology, computational geophysics, tectonophysics or a related area.
- A track-record of independent research as evidenced by publications in peer-reviewed journals and presentations at conferences.
- Knowledge of and/or expertise in two or more of the following would highly be desirable:
  - common programming language, such as scientific Python, Matlab, or C++
  - seismic data processing and computing
  - international standard data formats (e.g. miniSEED or SAC)
  - seismic database management tools (e.g. SeisComp3 or Antelope)
  - data visualisation techniques
  - experience in field-based passive source seismology
- An ability and commitment to contribute to bids for competitive external funding to support individual and collaborative research activities.
- Evidence of an ability and willingness to teach at all levels.
- The ability to assist in the supervision of students working on research projects.
- The ability to work as part of a team and to meet deadlines.
- Excellent oral and written English language skills and a demonstrated ability to communicate and interact effectively with a variety of staff and students in a cross-disciplinary academic environment and to foster respectful and productive working relationships with staff, students and colleagues at all levels.
- A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.

*The ANU conducts background checks on potential employees, and employment in this position is conditional on satisfactory results in accordance with the Background Checking Procedure which sets out the types of checks required by each type of position.*
In accordance with the Work Health and Safety Act 2011 (Cth) the University has a primary duty of care, so far as reasonably practicable, to ensure the health and safety of all staff while they are at work in the University.

- This form must be completed by the supervisor of the advertised position and appended to the back of the Position Description.
- This form is used to advise potential applicants of work environment and health and safety hazards prior to application.
- Once an applicant has been selected for the position they must familiarise themselves with the University WHS Management System via Handbook guidance [https://services.anu.edu.au/human-resources/health-safety/whs-management-system-handbook](https://services.anu.edu.au/human-resources/health-safety/whs-management-system-handbook)
- The hazards identified below are of generic nature in relation to the position. It is not correlated directly to training required for the specific staff to be engaged. Identification of individual WHS training needs must be in accordance with WHS Local Training Plan and through the WHS induction programs and Performance Development Review Process.

### Potential Hazards

- Please indicate whether the duties associated with appointment will result in exposure to any of the following potential hazards, either as a regular or occasional part of the duties.

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<tr>
<th>TASK</th>
<th>regular</th>
<th>occasional</th>
<th>TASK</th>
<th>regular</th>
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<td>key boarding</td>
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<td>laboratory work</td>
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<td>repetitive manual tasks</td>
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<td>work in confined spaces</td>
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### NON-IONIZING RADIATION

- solar | ☐ | ☒ |
- ultraviolet | ☐ | ☐ |
- infra red | ☐ | ☐ |
- laser | ☐ | ☐ |
- radio frequency | ☐ | ☐ |

### CHEMICALS

- hazardous substances | ☐ | ☐ |
- allergens | ☐ | ☐ |
- cytotoxics | ☐ | ☐ |
- microbiological materials | ☐ | ☐ |
- potential biological allergens | ☐ | ☐ |
- laboratory animals or insects | ☐ | ☐ |

For assistance please contact HR Division Ph. 6125 3346
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<tr>
<th>OTHER POTENTIAL HAZARDS (please specify):</th>
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<th>Date:</th>
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